**C. WESLEY WALTER**
*Department of Physics & Astronomy, Denison University, Granville, Ohio 43023 USA*
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**EDUCATION**

Ph.D. in Physics, Rice University (1989) – Advisor: Dr. F. Barry Dunning
M.A. in Physics, Rice University (1986)
B.S. in Physics, *Summa Cum Laude*, University of Dallas (1983)

**EXPERIENCE**

9/96 – Present — DENISON UNIVERSITY
- Professor (2007 – Present)
- Associate Professor (2000 –2007)
- Assistant Professor (1996 – 2000)

9/92 – 8/96 — SAINT MARY'S COLLEGE OF CALIFORNIA
- Director, Pre-Engineering Program (1995 – 96)
- Assistant Professor (1992 – 96)

9/89 – 9/97 — SRI INTERNATIONAL, Molecular Physics Laboratory
- Visiting Scientist (1993 – 97)
- Postdoctoral Fellow (1989 – 92) – Mentor: Dr. Jim R. Peterson

5/84 – 8/89 — RICE UNIVERSITY
- Graduate Research Assistant and Teaching Assistant

**PUBLICATIONS** More than 50 published journal articles in atomic and molecular physics

**GRANTS** Principal or Co-Principal Investigator on 15 grants, including 9 grants from the National Science Foundation

**HONORS**

Henry Chisholm Chair in the Natural Sciences, Denison Univ. (2020 – 25)
J. Reid Anderson Distinguished Professor of Physics & Astronomy, Denison University (2009 – 15)
Distinguished Visiting Fellow, Queens University, Belfast (2006)
Faculty for the 21st Century, Project Kaleidoscope (1997 – Present)
Exceptional Achievement Award, SRI International (1989)
Texaco Philanthropic Society Graduate Fellowship (1986 – 87)
CRC Press Outstanding Freshman Chemistry Student Award (1979 – 80)

## FUNDED GRANTS

### Principal Investigator

9. Denison University Research Foundation Grant, $4,818 (2013)
*"Toward Laser Cooling of Negative Ions: Investigation of the Negative Ion of La"*

8. Mellon Foundation (Denison University) Faculty Career Enhancement Grant, $2,400 (2010).

7. National Science Foundation (NSF) Grant, $279,477 (2005 – 8); Co-PI: N.D. Gibson
*"RUI: Structure and Spectroscopy of Negative Ions"*

6. National Science Foundation (NSF) Grant, $224,527 (2002 – 5); Co-PI: N.D. Gibson
*"RUI: Spectroscopy and Structure of Negative Ions"*

5. National Science Foundation (NSF) Grant, $224,460 (1999 – 2002); Co-PI: N.D. Gibson
*"RUI: Laser Spectroscopy of Negative Ions"*

4. National Science Foundation (NSF) Grant for Major Research Instrumentation, $200,916 (1998 – 2001); Co-PIs: K.A. Coplin, N.D. Gibson, and M.E. Mickelson
*"Optical and Laser Spectroscopy Instrumentation for Research and Education"*

3. Research Corporation Grant, $30,720 (1997 – 2001)
*"Experimental Search for Small Doubly-Charged Negative Ions"*

2. Denison University Research Foundation Grant, $2,175 (1997 – 98)
*"Development of an Ion Beam Mass Spectrometer"*

1. NSF Research Opportunity Award, $4,500 (1993); Co-PI: J.R. Peterson, SRI International
*"Photodetachment Spectroscopy of $He^-$"*

### Co-Principal Investigator

6. National Science Foundation (NSF) Grant, $344,000 (2017 – 21); PI: N.D. Gibson
*"RUI: Structure and Dynamics of Negative Ions"*

5. National Science Foundation (NSF) Grant, $308,862 (2014 – 17); PI: N.D. Gibson
*"RUI: Negative Ion Photodetachment Spectroscopy"*

4. National Science Foundation (NSF) Grant, $274,000 (2011 – 14); PI: N.D. Gibson
*"RUI: Valence and Inner-shell Negative Ion Photodetachment Spectroscopy"*

3. Wenner-Gren Foundation of Sweden Visiting Researcher Grant, in collaboration with Prof. Dag Hanstorp (University of Gothenburg), $10,000 (2010).

2. National Science Foundation (NSF) Grant, $283,000 (2008 – 11); PI: N.D. Gibson
*"RUI: Valence and Inner-shell Negative Ion Spectroscopy"*

1. NASA Space Physics Educational Outreach Grant, $9,900 (1993 – 5); PI: R.A. Copeland,
*"Aurora in a Bottle: An Educational Project"*

## SERVICE – Major Activities at Denison University

Search Committee for Dean of the Faculty (2018)
Co-leader, Early Career Faculty Learning Community (Spring 2018)
Campus Sustainability Committee (2017-20): Chair (2019-20), Vice-Chair and University Council Representative (2018-19)
Denison Heating Plant Evaluation Team (2018-20)

Be Wise Summer Science Camp for 8th-Grade Girls, Presenter for astronomy sessions (2017, 18)
Search Committee for Associate Provost for Faculty Affairs (2017)
Search Committee for Director of Foundation and Corporate Relations (2016)
Faculty Representative to the Board of Trustees Committee for Enrollment (2015-17)
Working Group on Faculty Expectations and Incentives (FIG) (2014-15)
Search Committee for Vice President of Finance and Administration (2014-15)
Finance Committee: Vice Chair (2014-15)
Selections and Elections Committee (2014-17)
Co-leader, New Faculty Seminar on Learning and Teaching (2013-15)
Co-organizer, Faculty Research Dinners (2013-2016)
Early Career Programming Committee, Co-organizer of New Faculty Orientation (2012-2019)
Working Group on Checklists and Processes for Senior & Salary Reviews (2012)
Panelist, New Department Chairs Workshop (2012)
Committee on Intercollegiate Athletics (2011-2013)
Chair, Operations Advisory Group for the Campus Sustainability Committee (2011)
R.C. Good Fellowship Review Committee (2011, 2012)
Campus Energy Project Proposal Review Committee (2011)
Panelist, Faculty of Color and International Faculty Meeting on Tenure Process (2011)
Panelist, Early Career Programming Session on Preparing for a Third-Year Review (2010,11,12)
Chair, Department of Physics & Astronomy (2000-2001, Spring 2002-2003, 2006-9)
President's Advisory Board (2007-9)
Pre-Engineering Program Director (1997-2000, 2008-9)
Religious Life Advisory Board (2007-9)
Co-organizer, Liberal Education Workshops (2008)
Coordinator, Tuesday Lunch Talk Series (Fall 2008)
Internal Member of the External Review Team for the Honors Program (2007)
Co-organizer, Oral Communication Workshops (2005)
Academic Affairs Council (2004-5 and 2006-7): Chair (2004-5), Vice-chair (2006-7)
Denison Representative to the GLCA Academics Committee (2004-6)
Task Force on Promotion and Tenure Criteria and Procedures (2003-4)
Faculty Representative to the Board of Trustees Committee for Academic Affairs (2003-5)
Faculty Representative to the Board of Trustees Committee for Honorary Degrees (2003-5)
Homestead Advisory Board (2002-4)
Environmental Studies Committee (2003-4)
Panelist, New Advisor's Workshop (2003, 2004)
June O Advisor (2002-5, 2008, 2012, 2015-20), August O Advisor (2005), Staff selection committee (2003)
Workshop leader, Admissions Sciences Overnight (1996, 1997, 2002, 2005)
Search Committee, Chaplain (2003)
Search Committee, Honors Program Director (2002)
Panelist, Fall Faculty Conference "Teaching with Technology" (2000)
SWOT Committee "Living and Learning at Denison" (2000)
Co-advisor, Denison Jewish Fellowship/Hillel (1999-2003)
Honors Committee (1999-2001)
First-Year Programs Committee (1997-2004)
Science Outreach, Planetarium and Observatory Shows (over 100 programs at Denison)

**Professional Service**

External reviewer, Department of Physics & Astronomy, University of Montana
General Committee Member: International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC) (2011 – 15)
Education Committee Member and Chair: American Physical Society – Division of Atomic, Molecular, and Optical Physics (2007 – 2009); Chair (2008 – 9)
Grant Proposal Reviewer: National Science Foundation, the Research Corporation, and the Petroleum Research Fund
Manuscript reviewer: *Physical Review Letters, Physical Review A*, *Journal of Chemical Physics*, *Surface Science Letters*, *Journal of Physics G*, *American Journal of Physics*, *The Physics Teacher*, *Journal of Chemical Education,* textbooks in Electronics and Modern Physics
PhD Dissertation Defense "Opponent", University of Gothenburg, Sweden (2004)
GRE Subject Test in Physics, Question writer/reviewer (2000, 2002, 2004)
PRAXIS test for new high school physics teachers, Question writer/reviewer (2003)

**Student Research Supervised at Denison**

*(all projects co-advised with Prof. Dan Gibson, except those marked with *)*

Summer

2019: Sarah Spielman*, Remington Ponce*, Alexandra Specht* (Swarthmore College)
2018: Kush Patel, Sarah Spielman
2017: Ryan Drumm, Romo Li, Scott Miller
2016: Archie Jugdersuren, Wae Nakayama, Daniel Gibson (Granville High School), Thomas Patton (Granville High School), Jenna Horowitz* (Biotechnology High School)
2015: Nic Lyman, Sam Strosnider, Junzhi Wang
2013: Kristina Dungan, Brad Matola, Jack Ogilvie, Seed Zeng
2012: Clay Crocker, Kristina Dungan, Brad Matola, Matt Scharpf
2011: Adam Lebovitz, Dan Matyas, Kirsten Liebl (Oberlin College)
2010: Rachael Alton, Yige Li, Edwin Lou, Dan Matyas
2009: Derrick Carman, Yige Li, Dan Matyas
2008: Jacob Shapiro, Derrick Carman
2007: Corey Janczak, Ali Snedden, Richard Field, Jacob Shapiro
2006: Corey Janczak, Ali Snedden, Richard Field
2005: Keith Starr, David Richardson, Craig Mosier, Corey Janczak
2004: Keith Starr, David Richardson, Corey Janczak
2003: Nate Chandler*
2002: John Pyles, Nate Chandler
2001: Jason McClure, Demian Phillips
2000: Kim Moore, Mike Gasda, David Zawistowski
1999: Mike Gasda
1998: David Lim*, Ryan Kalas*
1997: David Lim*

Honors and Senior Research Projects

2020-21 Sarah Spielman*, Senior Research
2018-19 Julia Proctor*, Senior Research
2015-16 Nic Lyman, Richard Wang, Senior Research
2012-13 Clay Crocker, Senior Research

2011-12 Dan Matyas, Senior Research
2005-6 Keith Starr, Senior Research
2002 Jason McClure*, Senior Research
2000-1 Kim Moore*, Honors: "The Effects of Electric Fields on Negative Ion Photodetachment"
2000-1 Heidi Jackman*, Honors: "Aurora in a Bottle"
1999 David Lim, Senior Research

**REFEREED PUBLICATIONS** *(* - Undergraduate student co-author)*

53. C. W. Walter, N. D. Gibson, N. B. Lyman*, and J. Wang*, "Photodetachment Spectroscopy of Quasibound States of the Negative Ion of Lanthanum", *Physical Review A* **102**, 042812 (2020).

52. C.W. Walter, N.D. Gibson, and S.E. Spielman*, "Electron Affinity of Thallium Measured with Threshold Spectroscopy", *Physical Review A* **101**, 052511 (2020).

51. N. D. Gibson, C. W. Walter, C. Crocker*, J. Wang*, W. Nakayama*, J. Yukich, E. Eliav, and U. Kaldor, "Electron Affinity of Gallium and Fine Structure of $Ga^-$: Experiment and Theory", *Physical Review A* **100**, 052512 (2019).

50. I. Dumitriu , R. C. Bilodeau, T. W. Gorczyca, C. W. Walter, N. D. Gibson, D. Rolles, Z. D. Pešić, A. Aguilar , and N. Berrah, "Inner-Shell Photodetachment from $Ni^-$: A Giant Feshbach Resonance", *Physical Review A* **96**, 023405 (2017).

49. Alban Kellerbauer, Giovanni Cerchiari, Elena Jordan, and C. W. Walter, "High-resolution Laser Spectroscopy on Bound–Bound Transitions in $La^-$", *Physica Scripta* **90**, 054014 (2015).

48. C.W. Walter, N. D. Gibson, D. J. Matyas*, C. Crocker*, K.A. Dungan*, B.R. Matola*, and J. Rohlén, "Candidate for Laser Cooling of a Negative Ion: Observations of Bound-Bound Transitions in $La^-$", *Physical Review Letters* **113**, 063001 (2014).

47. A. O. Lindahl, J. Rohlén, H. Hultgren, D. J. Pegg, C.W. Walter, and D. Hanstorp, "Observation of Thresholds and Overlapping Resonances below the 10 $^2P_{1/2,3/2}$ Thresholds in the Photodetachment of $Cs^-$", *Physical Review A* **88**, 053410 (2013).

46. R.C. Bilodeau, N.D. Gibson, C.W. Walter, D.A. Esteves-Macaluso, S. Schippers, A. Müller, R.A. Phaneuf, A. Aguilar, M. Hoener, J.M. Rost, and N. Berrah, "Single-Photon Multiple-Detachment in Fullerene Negative Ions: Absolute Ionization Cross Sections and the Role of the Extra Electron", *Physical Review Letters* **111**, 043003 (2013).

45. R.C. Bilodeau, N.D. Gibson, C.W. Walter, A. Aguilar, and N. Berrah, "Inner-shell Photodetachment: Shape and Feshbach Resonances of Anions", *Journal of Electron Spectroscopy and Related Phenomena* **185**, 219 (2012).

44. A. O. Lindahl, J. Rohlén, H. Hultgren, I. Yu. Kiyan, D. J. Pegg, C. W. Walter, and D. Hanstorp, "Experimental Studies of Partial Photodetachment Cross Sections in $K^-$ below the K(7 $^2$P) Threshold", *Physical Review A* **85**, 033415 (2012).

43. A. O. Lindahl, J. Rohlén, H. Hultgren, I. Yu. Kiyan, D. J. Pegg, C. W. Walter, and D. Hanstorp, "Threshold Photodetachment in a Repulsive Potential", *Physical Review Letters* **108**, 033004 (2012).

42. C.W. Walter, N.D. Gibson, Y.-G. Li*, D. J. Matyas*, R.M. Alton*, S.E. Lou*, R.L. Field III*, D. Hanstorp, L. Pan, and D.R. Beck, "Experimental and Theoretical Study of Bound and Quasi-bound States of $Ce^-$", *Physical Review A* **84**, 032514 (2011).

41. I. Dumitriu, R. C. Bilodeau, T. W. Gorczyca, C. W. Walter, N. D. Gibson, Z. D. Pešić, D. Rolles, and N. Berrah, "Inner-Shell Photodetachment from $Ru^-$", *Physical Review A* **82**, 043434 (2010).

40. C.W. Walter, N.D. Gibson, D. J. Carman*, Y.-G. Li*, and D. J. Matyas*, "Electron Affinity of Indium and the Fine Structure of $In^-$ Measured using Infrared Photodetachment Threshold Spectroscopy", *Physical Review A* **82**, 032507 (2010).

39. I. Dumitriu, R. C. Bilodeau, T. W. Gorczyca, C. W. Walter, N. D. Gibson, A. Aguilar, Z. D. Pešić, D. Rolles, and N. Berrah, "Inner-Shell Photodetachment from $Fe^-$", *Physical Review A* **81**, 053404 (2010).

38. C.W. Walter, N.D. Gibson, R.L. Field III*, A.P. Snedden*, J.Z. Shapiro*, C. M. Janczak*, D. Hanstorp, "Electron Affinity of Arsenic and the Fine Structure of $As^-$ Measured using Infrared Photodetachment Threshold Spectroscopy", *Physical Review A* **80**, 014501 (2009).

37. R.C. Bilodeau, I. Dumitriu, D. Rolles, N.D. Gibson, C.W. Walter, and N. Berrah, "Promoting a Core Electron to Fill a *d*-shell: A Threshold Law and Shape and Feshbach Resonances", *Physical Review A* **80**, 0131403 (Rapid Communications) (2009).

36. J.D. Alexander, C.R. Calvert, R.B. King, O. Kelly, W.A. Bryan, G.R.A.J. Nemeth, W.R. Newell, C.A. Froud, I.C.E. Turcu, E. Springate, P.A. Orr, J. Pedregosa-Gutierrez, C.W. Walter, R.A. Williams, I.D. Williams, and J.B. Greenwood, "Short Pulse Laser-induced Dissociation of Vibrationally Cold, Trapped Molecular Ions", *Journal of Physics B* **42**, 154027 (2009).

35. C.W. Walter, N.D. Gibson, C. M. Janczak*, K.A. Starr*, A.P. Snedden*, R.L. Field III*, and P. Andersson, "Infrared Photodetachment of $Ce^-$ : Threshold Spectroscopy and Resonance Structure", *Physical Review A* **76**, 052702 (2007).

34. N. Berrah, R.C. Bilodeau, I. Dumitriu, J.D. Bozek, N.D. Gibson, C.W. Walter, G.D. Ackerman, O. Zatsarinny, and T.W. Gorczyca, "Shape resonances in the absolute K-shell photodetachment of $B^-$", *Physical Review A* **76**, 032713 (2007).

33. P.A. Orr, I.D. Williams, J.B. Greenwood, I.C.E. Turcu, W.A. Bryan, J. Pedregosa-Gutierrez, C.W. Walter, "Above threshold dissociation of vibrationally cold $HD^+$ molecules", *Physical Review Letters* **98**, 163001 (2007).

32. R.C. Bilodeau, C.W. Walter, I. Dumitriu, N.D. Gibson, G.D. Ackerman, J.D. Bozek, B.S. Rude, R. Santra, L.S. Cederbaum, and N. Berrah, "Photo double detachment of $CN^-$: Electronic decay from an inner-valence hole in molecular anions", *Chemical Physics Letters* **426**, 237 (2006).

31. C.W. Walter, N.D. Gibson, R.C. Bilodeau, N. Berrah, G.D. Ackerman, J.D. Bozek, and A. Aquilar, "Shape resonance in K-shell photodetachment from $C^-$", *Physical Review A* **73**, 062702 (2006).

30. R.C. Bilodeau, N.D. Gibson, J.D. Bozek, C.W. Walter, G.D. Ackerman, P. Andersson, M. Perri, and N. Berrah, "High-charge-state formation following inner-shell photodetachment from $S^-$", *Physical Review A* **72**, 050701 (Rapid Communications) (2005).

29. R.C. Bilodeau, J.D. Bozek, N.D. Gibson, C.W. Walter, G.D. Ackerman, I Dumitriu, and N.Berrah, "Inner-shell photodetachment thresholds: Unexpected long-range validity of the Wigner law", *Physical Review Letters* **95**, 083001 (2005).

28. N.D. Gibson, C. W. Walter, O. Zatsarinny, T.W. Gorczyca, G.D. Ackerman, J.D. Bozek, M. Martins, B.M. McLaughlin, and N. Berrah, "K-shell photodetachment from $C^-$: Experiment and theory", *Physical Review A* **67**, 030703 (Rapid Communications) (2003).

27. N. Berrah, J.D. Bozek, A.A. Wills, G. Turri, H.-L. Zhou, S.T. Manson, G. Ackerman, B. Rude, N.D. Gibson, C.W. Walter, L. VoKy, A. Hibbert, S.M. Ferguson, "K-shell photodetachment of $Li^-$: Experiment and theory", *Physical Review Letters* **87**, 253002 (2001).

26. N.D. Gibson, M.D. Gasda*, K. A. Moore,* D.A. Zawistowski*, and C.W. Walter, "*s*-wave photodetachment from $S^-$ ions in a static electric field", *Physical Review A* **64**, 061403 (Rapid Communications) (2001).

25. C. W. Walter, P.C. Cosby, and H. Helm, "Photoexcitation and predissociation intensities of the c' $^1\Sigma^+_u$ ($v$ = 3 and 4), c $^1\Pi_u$ ($v$ = 3 and 4), and b' ($v$ = 10, 12, 13, and 15) states of $N_2$", *Journal of Chemical Physics* **112**, 4621 (2000).

24. C.W. Walter, P.C. Cosby, and H. Helm, "Predissociation quantum yields of singlet nitrogen", *Physical Review A* **50**, 2930 (1994).

23. C.W. Walter, J.A. Seifert*, and J.R. Peterson, "Reexamination of the $He^-$ $1s2p^2$ $^4P^e$ shape resonance: Details of its properties and a precise electron affinity for He $2^3S$", *Physical Review A* **50**, 2257 (1994).

22. C. W. Walter, P.C. Cosby, H. Helm, "N($^4S^o$), N($^4D^o$), and N($^4P^o$) yields in predissociation of excited singlet states of $N_2$", *Journal of Chemical Physics* **99**, 3553 (1993).

21. H. Helm and C.W. Walter, "Observation of electronically excited states of tetraoxygen", *Journal of Chemical Physics* **98**, 5444 (1993).

20. C.W. Walter, P.C. Cosby, J.R. Peterson, "Rovibrational product distributions of $O_2^+$ from the reaction of $O^+$ ($^4S$) with $CO_2$", *Journal of Chemical Physics* **98**, 2860 (1993).

19. C.W. Walter, Y.K. Bae, D.C. Lorents, J.R. Peterson, "Production and stability of multiply charged $C_{60}$ and $C_{70}$ fullerene ions", *Chemical Physics Letters* **195**, 543 (1992).

18. C.W. Walter and J.R. Peterson, "A shape resonance in $Ca^-$ photodetachment and the electron affinity of Ca ($^1S$)", *Physical Review Letters* **68**, 2281 (1992).

17. C.W. Walter, C.F. Hertzler, P. Devynck, G.P. Smith, J.R. Peterson, "Photodetachment of $WO_3^-$ : The electron affinity of $WO_3$", *Journal of Chemical Physics* **95**, 824 (1991).

16. C.W. Walter, C.F. Hertzler, P. Devynck, G.P. Smith, J.R. Peterson, "Photodetachment of high electron affinity molecular negative ions", *Nuclear Instruments and Methods B* **56/57**, 216 (1991).

15. A. Kalamarides, R.W. Marawar, X. Ling, C.W. Walter, B.G. Lindsay, K.A. Smith, F.B. Dunning, "Negative ion production in collisions between K(*n*d) Rydberg atoms and $CF_3Br$ and $CF_2Br_2$", *Journal of Chemical Physics* **92**, 1672-1676 (1990).

14. A. Kalamarides, C.W. Walter, B.G. Lindsay, K.A. Smith, F.B. Dunning, "Post-attachment interactions in K(*n*d) -- $CF_3I$ collisions at intermediate *n*", *Journal of Chemical Physics* **91**, 4411 (1989).

13. C.W. Walter, B.G. Lindsay, K.A. Smith, F.B. Dunning, "Translational energy release in dissociative electron attachment to $CH_3I$, $CD_3I$, $CF_3I$, and $CF_3Br$", *Chemical Physics Letters* **154**, 409 (1989).

12. C.W. Walter, K.A. Smith, F.B. Dunning, "Translational kinetic energy release in dissociative electron attachment to $C_2Cl_4$, $CCl_4$, $CFCl_3$, and 111-$C_2Cl_3F_3$", *Journal of Chemical Physics* **90**, 1652 (1989).

11. A. Kalamarides, C.W. Walter, K.A. Smith, F.B. Dunning, "Negative ion formation in K(*n*d)-$CS_2$ collisions: Detection of electric-field-induced detachment from $CS_2^-$", *Journal of Chemical Physics* **89**, 7226 (1988).

10. R.W. Marawar, C.W. Walter, K.A. Smith, F.B. Dunning, "Study of low-energy electron attachment to $C_6F_6$ using K(*n*d) Rydberg atoms", *J. Chemical Physics* **88**, 2853 (1988).

9. R.W. Marawar, C.W. Walter, K.A. Smith, F.B. Dunning, "Use of K(*n*d) Rydberg atoms to investigate low-energy electron attachment to $C_2Cl_4$", *J. Chemical Physics* **88**, 176 (1988).

8. A. Kalamarides, C.W. Walter, B.G. Zollars, K.A. Smith, F.B. Dunning, "Associative ionization in collisions of K(*n*d) Rydberg atoms with molecules", *Journal of Chemical Physics* **87**, 4238 (1987).

7. C.W. Walter, C.B. Johnson, A. Kalamarides, D.F. Gray, K.A. Smith, F.B. Dunning, "Study of low-energy electron attachment to $C_7F_{14}$ using K(*n*d) Rydberg atoms", *Journal of Physical Chemistry* **91**, 4284 (1987).

6. C.B. Johnson, C.W. Walter, A. Kalamarides, K.A. Smith, F.B. Dunning, "Study of low-energy electron attachment to 111-$C_2Cl_3F_3$ using K(*n*d) Rydberg atoms", *Journal of Chemical Physics* **86**, 4945 (1987).

5. C.W. Walter, B.G. Zollars, C.B. Johnson, K.A. Smith, F.B. Dunning, "Formation of $O_2^-$ ions in K(*n*d) -- $O_2$ collisions at intermediate *n*", *Physical Review A* **34**, 4431 (1986).

4. B.G. Zollars, C.W. Walter, C.B. Johnson, K.A. Smith, F.B. Dunning, "Associative ionization in K(*n*d) -- $H_2O$ collisions at intermediate *n*", *J. Chemical Physics* **85**, 3132 (1986).

3. B.G. Zollars, C.W. Walter, F. Lu, C.B. Johnson, K.A. Smith, F.B. Dunning, "Ionization in K(*n*d) -- $SF_6$ and K(*n*d) -- $CCl_4$ collisions at intermediate *n*", *J. Chemical Physics* **84**, 5589 (1986).

2. B.G. Zollars, C. Higgs, F. Lu, C.W. Walter, L.G. Gray, K.A. Smith, F.B. Dunning, "Ionization in Rydberg-atom -- $SF_6$ collisions at high *n*", *Physical Review A* **32**, 3330 (1985).

1. C.W. Walter, G.B. McMillian, K.A. Smith, F.B. Dunning, "Computer-assisted high-voltage waveform measurement", *Reviews of Scientific Instrumentation* **56**, 2171 (1985).

## MANUSCRIPTS UNDER REVIEW

1. M. S. Safronova, C. Cheung, M. G. Kozlov, S. E. Spielman*, N. D. Gibson, and C. W. Walter, "Predicting quasibound states of negative ions", submitted to *Physical Review A* (11/2020).

## CONFERENCE PROCEEDINGS (Refereed)

3. R.C. Bilodeau, J. D. Bozek, G.D. Ackerman, N.D. Gibson, C.W. Walter, A. Aguilar, G. Turri, I. Dumitriu, N. Berrah, "Multi-Auger decay in negative ion photodetachment", *ICPEAC (e,2e) Workshop Proceedings* (2005).

2. N. Berrah, R.C. Bilodeau, J.D. Bozek, C.W. Walter, N.D. Gibson, G.D. Ackerman, "Double Auger decay, Feshbach and shape resonances in negative ions", *X05 Conference Proceedings* (2005).

1. H. Helm, I. Hazell, C.W. Walter, P.C. Cosby, "On the branching in dissociative recombination of $O_2^+$", *Proceedings of the 1995 Workshop on Dissociative Recombination*, ed. D. Zajfman, p. 139-150 (World Scientific, New Jersey, 1996).

## PEDAGOGICAL PUBLICATIONS (Refereed)

1. C.W. Walter, "Home Energy Assessments in a General Education First-Year Seminar", Vignette in the *Council on Undergraduate Research Quarterly* **33**, 34 (Summer 2013).

## PRESENTATIONS (Mostly unrefereed) *(* - Undergraduate student co-author)*

116. C.W. Walter, N.D. Gibson, and S.E. Spielman*, "Precise Measurement of the Electron Affinity of Thallium using Laser Photodetachment Threshold Spectroscopy", *Poster*, DAMOP – American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting, Virtual (2020).

115. C.W. Walter, N.D. Gibson, K.R. Patel*, S.E. Spielman*, "Infrared Laser Spectroscopy Measurement of the Electron Affinity of Thallium", *Poster*, ICPEAC XXXI – The International Conference on Photonic, Electronic, and Atomic Collisions, Deauville, France (2019).

114. C.W. Walter, N.D. Gibson, K.R. Patel*, S.E. Spielman*, "Electron Affinity of Thallium Measured with Infrared Laser Photodetachment Threshold Spectroscopy", *Poster*, DAMOP – American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting, Milwaukee, WI (2019).

113. C.W. Walter, N.D. Gibson, G.R. Drumm*, Y. Li*, S.M. Miller*, "Measurement of the Electron Affinity of Thallium by Photodetachment Threshold Spectroscopy", *Poster*, DAMOP – American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting, Ft. Lauderdale, FL (2018).

112. C.W. Walter, N.D. Gibson, N.B. Lyman*, J. Wang*, "Photodetachment Spectroscopy of Bound and Quasibound States of the Negative Ion of Lanthanum", *Poster*, ICPEAC XXX – The International Conference on Photonic, Electronic, and Atomic Collisions, Cairns, Australia (2017).

111. N.D. Gibson, C.W. Walter, C.T. Crocker*, W. Nakayama*, J Wang*, and J.N. Yukich, "Infrared Photodetachment Spectroscopy Measurement of the Electron Affinity of Gallium and the Fine Structure of $Ga^-$", *Poster*, ICPEAC XXX, Cairns, Australia (2017).

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